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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/900,254	07/25/1997	PETER PFEUFFER	22750/350	7919

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EXAMINER

YAO, SAM CHAUN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 09/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

08/900,254

Applicant(s)

PFEUFFER, PETER

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As noted in the prior office action, claim 1 recitation of using synthetic fibers that are "*fully drawn*" does not have sufficient support in the original disclosure. One of the tests, the court effectively uses, for determining whether or not something is new matter is a sufficiency of support in the original disclosure. The question that must be answered is "*whether the disclosure of the application relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter*", In re Ralston 227 USPQ 177. Here, it would appear that Applicant did not have possession at that time of the later claimed subject matter of using "fully drawn synthetic fibers" (emphasis added).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 4,496,583) in view of either (Meyer (US 5,232,595) or Narou (US

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4,876,007)) and Norton (US 2,862,542) for reasons of record set forth in an Examiner's Answer in Paper No. 24 and Paper No. 30 numbered paragraph 5.

4. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (US 4,496,583) in view of either (Meyer (US 5,232,595) or Narou (US 4,876,007)), Norton (US 2,862,542) for reasons of record set forth in an Examiner's Answer in Paper No. 24 and further in view of Sabee (US 4,910,064) in Paper No. 30 numbered paragraph 6.

### ***Response to Arguments***

5. Applicant's arguments filed 08-23-02 have been fully considered but they are not persuasive.

On page 2, Counsel argued that *"While the Specification does not specifically state that the web is formed from fully drawn and undrawn synthetic fibers, Applicants maintain that it is inherent that the web of the present invention be formed from fully drawn and undrawn synthetic fibers. Only fully drawn fibers, e.g., having a very high melting point and softening point of more than 220 °C, enable the fiber structure to be maintained during calendaring of the fabric in accordance with the process of the present invention, thereby providing the non-woven fabric with satisfactory stability and high porosity."* (emphasis added). At the outset, it should be noted that none of the recited claims require: a) *very high melting point and softening point of more than 220 °C*; and b) *"providing the non-woven fabric with satisfactory stability and high porosity."* In fact, the original disclosure as a whole does not even remotely disclose any fabric porosity, or melting/softening temperature, much less, a fabric having a *"high porosity"* or a

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melting/softening temperature of greater than "220 °C". As for Counsel's assertion that, "Only fully drawn fibers" can achieve Applicant's objective, it is submitted that Counsel has only presented conclusory statements and arguments. Counsel has failed to provide any supporting evidence that "Only" the use of "*fully drawn fibers*" can achieve Applicant's objective of forming a filter where "*spacers do not change their shape and remain stable during the entire service life*". Is Counsel suggesting that, "Only fully drawn fibers" can have a melting/softening temperature of greater than 220 °C? Equally important, if synthetic fibers which are substantially fully drawn fibers (say, significantly over 90% fully drawn fibers) are used, is Counsel suggesting that it would not be possible to achieve Applicant's objective? If not, why not? How about, if a partially drawn high temperature melting polymeric materials such as aromatic polyimide type polymers, for example, a polyimide taught by Kunimune et al (US 4,904,758; abstract; melting temperature range is 300-400 °C), **or** a Ryton fibers (i.e. polyphenylene sulfide with a melting temperature of about 285 °C) are used, is Counsel suggesting that one can't achieve Applicant's objective? If not, why not?

As for Counsel's argument on page 4 regarding the Yamamoto et al patent, Examiner strongly disagrees with Counsel's assertion that "*Yamamoto describes a process that evidently employs partially-drawn fibers.*". As noted in the prior office action, Yamamoto et al teaches using undrawn binder fibers which fuse (i.e. melt) at a temperature range of "*110 °C to 200 °C*". This teaching would have suggested to one in the art that, the drawn base fibers would/should have a melting temperature which is substantially greater than 200 °C. Otherwise, the drawn fibers would be destroyed (i.e.

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melted) during a heat-bonding operation. In fact, it is a common practice in the art to use base fibers having a melting temperature which are 20 °C to over 30 °C greater than a melting temperature of a binder fiber in order to avoid damaging the base fibers during a heat bonding operation. In other words, the teachings of the Yamamoto patent as a whole would have suggested to one in the art to use drawn base fibers which have a melting temperature range of greater than about 220 °C, when a melting temperature of undrawn binder fibers is around 200 °C. Based on Counsel's characterization of fully drawn fibers on page 2 4<sup>th</sup> full paragraph, it would be reasonable to surmise that, since it would have been obvious in the art to use drawn base fibers which have a melting temperature range of greater than 220 °C, when a melting temperature of undrawn fibers is around 200 °C, then using fully drawn fibers (i.e. melting temperature of greater than 220 °C) would have been obvious in the art making the filter of Yamamoto et al. In any event, as noted in the prior office action, using fully drawn fibers would have been obvious in the art, since it is a common practice in the art to use base fibers from highly oriented (fully drawn) fibers in order to enhance the strength of a resultant fiber web. As for Counsel's arguments on page 4 regarding Examples 13-14, Counsel is herein apprised that a reference is not confined to the disclosed working examples. A proper evaluation of the reference must include a determination of what the reference reasonably conveyed to one having ordinary skill in the art. To this end, it is believed that, the Yamamoto et al patent does not teach away from using fully drawn fibers. The operating calendaring temperature of 130 °C or 180 °C in examples 13-14 clearly depends on the melting range of undrawn binder fibers. This does not provide any

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information whether or not, partially or fully drawn base fibers are used in the process of Yamamoto et al. In fact, the calendaring temperature cited by Counsel would not work, if undrawn binder fibers having a melting temperature of around 200 °C are used (col. 3 lines 16-21). As for Counsel's argument on page 4 that "... *Yamamoto describes steps that result in a fiber which is only partially drawn fibers, as evidenced by the fact that the binding ability of the partially drawn fibers is only present at a temperature of 180 degrees C (or at 130 degrees C in Example 14) and at a high pressure*" (emphasis added), is Counsel suggesting that drawn base fibers taught by Yamamoto et al are used as binder fibers **or** binder fibers in the Yamamoto et al process are partially drawn fibers? If so, Counsel is clearly mischaracterizing the Yamamoto et al patent. The drawn base fibers are not used as a binding material; and the binder fibers are NOT partially drawn fibers (i.e. they are undrawn fibers). Finally, as for Counsel's argument on page 6 regarding an infinite possibilities between an undrawn to fully drawn fibers, this does not change the fact, that one in the art, motivated by a desire to form a high strength and stiff filter fabric in the process of Yamamoto et al, would have form a highly oriented (i.e. fully drawn) fibers; and it is old in the art of making nonwoven filters to use fully drawn fibers. Absent any showing of unexpected benefit, such is taken to be well within the purview of choice in the art.

As for Counsel's argument on page 8 regarding the Sabee patent, it is submitted that, the teachings of Sabee does not teach away from using profiled calender rolls, when fully drawn fibers are used. Sabee teaches using smooth bonding rolls because it is desired to form a flat non-woven web. Clearly, the teachings of Sabee would have

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suggested to one in the art to use fully drawn fibers, if stiffer high-strength non-woven filter is desired.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (703) 308-4788. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 305-7718 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

scy  
September 11, 2002